

TYPE CERTIFICATE DATA SHEET NO. 1

T.C. 1
Revision 4
TZ-123000
GZ-19
GZ-19A
GZ-20
GZ-20A
March 22, 2004

Type Certificate Holder: Lockheed Martin Maritime Systems & Sensors - Akron
1210 Massillon Road
Akron, OH 44315-0001

Type Certificate Holder Record: Goodyear Aerospace Corporation transferred TC 1 to Loral Systems Group on May 19, 1987

Loral Systems Group transferred TC 1 to Loral Defense Systems – Akron on March 13, 1990

Loral Defense Systems – Akron transferred TC 1 to Lockheed Martin Tactical Defense Systems on June 19, 1996

Lockheed Martin Tactical Defense Systems transferred TC 1 to Lockheed Martin Naval Electronics & Surveillance Systems - Akron on May 4, 2001

Lockheed Martin Naval Electronics & Surveillance Systems - Akron transferred TC 1 to Lockheed Martin Maritime Systems & Sensors - Akron on March 22, 2004

MODELS: Goodyear Airship TZ-123000 (Navy L). GZ-19, GZ-19A, GZ-20, GZ-20A
(Revised 7/12/96)

I - Specifications Pertinent to All Models

Certification basis Type Certificate No. 1 (This type airship originally certificated January 1935 on basis of Navy approval.)

NOTE 1. Helium only to be used for lifting gas.

II - Model TZ-123000 (Navy L), Approved 6/21/46

Engines 2 Warner Super Scarabs
Fuel 73 minimum octane aviation gasoline
Engine limits For all operations, 2050 rpm (145 hp)
Maximum weight 7626 lbs.
No. seats 7
Maximum baggage 41 lbs. (aft of cabin)
Fuel capacity 100 gallons (two 50 gallon tanks on top of car)
Oil capacity 10 gallons
Serial Nos. eligible All Navy serial numbers

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III - Model GZ-19 Airship, Approved 9/16/59

Engines	2 Continental G0-300-A. Serial Nos. 5276 and 5277 eligible for pusher operation and propeller reversing.
Fuel	80/87 minimum octane aviation gasoline
Engine limits	All operations, 2800 rpm at 29.3" Hg. (154 hp) (derated)
Propeller and propeller limits	Hartzell constant-speed reversible propeller; hub HC-82XF-3L, blades L9333CH-3. Pitch settings at 30 in. sta: High +20.5 degrees, reverse -12 degrees.
Maximum weight	8336 lbs.
No. seats	7
Fuel capacity	100 gallons (two 50 gallon tanks on top of car)
Oil capacity	5 gallons (10 quarts per engine)
Serial Nos. eligible	C-135

IV - Model GZ-19A Airship, Approved 8/8/63

Engines	2 Continental G0-300A. Serial Nos. 5276 and 5277, 5776-8-A, 6314-0-A, 6316-3-A, 6317-3-A and 6318-3-A eligible for pusher operation and propeller reversing.
Fuel	80/87 minimum octane aviation gasoline
Engine limits	All operations, 2800 rpm at 29.3" Hg. (154 hp) (derated)
Propeller and propeller limits	Hartzell constant-speed reversible propeller; hub HC-82XF-3L, blades L9333CH-3. Pitch settings at 30 in. sta: High +20.5 degrees, reverse -12 degrees.
Maximum weight	9234 lbs.
No. seats	7
Fuel capacity	145 gallons (two 50 gallon tanks and 45 gallon tank on top of car)
Oil capacity	5 gallons (10 quarts per engine)
Serial Nos. eligible	C-135; Serial Nos. C-137, C-138, C-139, C-46, C-49, and C-63 will be eligible when modified in accordance with type design data.
Equipment	Approved Equipment List GZ-19A AOE 43-63, latest revision dated 5/9/66

NOTE 1. AiResearch GTP 30-54 Auxiliary Power Unit approved for optional installation in accordance with Goodyear Drawing 6071-1900, Dump chute extension required.

NOTE 2. Placard required:

Warning: Do not transfer fuel while APU is operating.

Warning: Do not dump fuel while APU is operating.

V - Model GZ-20 Airship, Approved 7/6/69

Engines	2 Continental IO-360-D (Eligible for pusher operation and propeller reversing)
Fuel	100/130 minimum grade aviation gasoline, 100, 100LL
Engine limits	All operations, 2800 rpm (210 hp) at 28 in. Hg.
Propeller and propeller limits	(a) 2 Hartzell constant speed (non-feathering) reversing BHC-92WF-3LG/LW8447A-6R pitch setting at the 30 in. station - low: 8.75 degrees, high: 21.0 degrees, reverse: -13 degrees. Diameter: Maximum 78 inches, no reduction permitted. Governor: Hartzell F-6-19 or F-6-19A.

Propeller and propeller limits (cont)	(b) 2 Hartzell constant speed (non-feathering) reversing BHC-92WF-3LG/LW8447A-8Q pitch setting at the 30 in. station - low: 8.75 degrees, high: 21.0 degrees, reverse: -13 degrees. Diameter: Maximum 76 inches, no reduction permitted. Governor: Hartzell F-6-19 or F-6-19A.
Maximum weight	12,320 lbs.
No. seats	7
Fuel capacity	306 gal. (5 tanks), right 49 gal. (48 gal. usable), left 44 gal. (43 gal. usable), reserve 49 gal. (48 gal. usable), 2 Auxiliary 82 gal. each (80 gal. usable).
Oil capacity	10 qt. (7 qt. usable)
Serial Nos. eligible	C-64; C-137 and C-49, will be eligible when modified in accordance with type design data.
Equipment	Approved Equipment List GZ-20 airship, revision F, dated 3/17/80 and FAA Approved Flight Manual revised 3/15/80 or subsequent FAA Approved revision.
NOTE 1.	AiResearch GTP 30-54 Auxiliary Power Unit approved for optional installation in accordance with Goodyear Drawing 20Z050-001. Dump chute extension required.
NOTE 2.	Stewart Warner 940F-24 Combustion Heater approved for optional installation in accordance with Dwg. 20Z374-001.
NOTE 3.	Placard required: (a) Caution: Continuous operation not permitted between 2150 and 2450 R.P.M. with external fuel tanks installed. (b) The following placard is optional in lieu of the placard described in Note 3.(a) when Hartzell BHC-92WF-3LG/LW8447A-6R propellers are installed: "Caution: Continuous operation not permitted between 2150 and 2400 R.P.M. with external fuel tanks installed." (c) <u>Warning</u> : Do not transfer fuel while APU is operating.

VI - Model GZ-20A Airship, Approved 4/19/72

Engines	2 Continental IO-360-D (Eligible for pusher operation and propeller reversing)
Fuel	100/130 minimum grade aviation gasoline, 100, 100LL
Engine limits	All operations, 2800 rpm (210 hp) at 28 in. Hg.
Propeller and propeller limits	(a) 2 Hartzell constant speed (non-feathering) reversing BHC-92WF-3LG/LW8447A-6R pitch setting at the 30 in. station - low: 8.75 degrees, high: 21.0 degrees, reverse: -13 degrees. Diameter: Maximum 78 inches, no reduction permitted. Governor: Hartzell F-6-19 or F-6-19A. (b) 2 Hartzell constant speed (non-feathering) reversing BHC-92WF-3LG/LW8447A-8Q pitch setting at the 30 in. station - low: 8.75 degrees, high: 21.0 degrees, reverse: -13 degrees. Diameter: Maximum 76 inches, no reduction permitted. Governor: Hartzell F-6-19 or F-6-19A.
Maximum weight	12,840 lbs.
No. seats	7
Fuel capacity	306 gal. (5 tanks), right 49 gal. (48 gal. usable), left 44 gal. (43 gal. usable), reserve 49 gal. (48 gal. usable), 2 external auxiliary 82 gal. each (80 gal. usable).
Oil capacity	10 qt. (7 qt. usable)
Serial Nos. eligible	4116, 4117, 4118, 4119

Equipment Approved Equipment List GZ-20A Airship, Revision G, dated 6/20/86 and FAA Approved Flight Manual revised 3/15/80 or subsequent FAA Approved revision.

NOTE 1. AiResearch GTP 30-54 Auxiliary Power Unit approved for optional installation in accordance with Goodyear Drawing 20Z050-001. Dump chute extension required.

NOTE 2. Stewart Warner 940F-24 Combustion Heater approved for optional installation in accordance with Dwg. 20Z374-001.

NOTE 3. Placard required (on Main Instrument Panel):

- (a) Caution: Continuous operation not permitted between 2150 and 2450 R.P.M. with external fuel tanks installed.
- (b) The following placard is optional in lieu of the placard described in Note 3.(a) when Hartzell BHC-92WF-3LG/LW8447A-6R propellers are installed: "Caution: Continuous operation not permitted between 2150 and 2400 R.P.M. with external fuel tanks installed."
- (c) This airship must be operated as a normal category aircraft in compliance with operating limitations stated in the form of placards, markings, and Approved Flight manuals.
- (d) This airship is Approved for VFR-IFR, day-night.
- (e) Warning: Do not refuel or dump fuel while APU is operating.
- (f) (AFT COMPARTMENT) Warning: Do not refuel while APU is operating.
- (g) (ON CONTROL LINE) Warning - Air-to-Helium sleeve Tie-Off-Pull only in emergency after removing external binding cord.
- (h) Warning - Airline control - pull chord to increase air flow into helium only after Air-to-Helium system is in operation.

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